

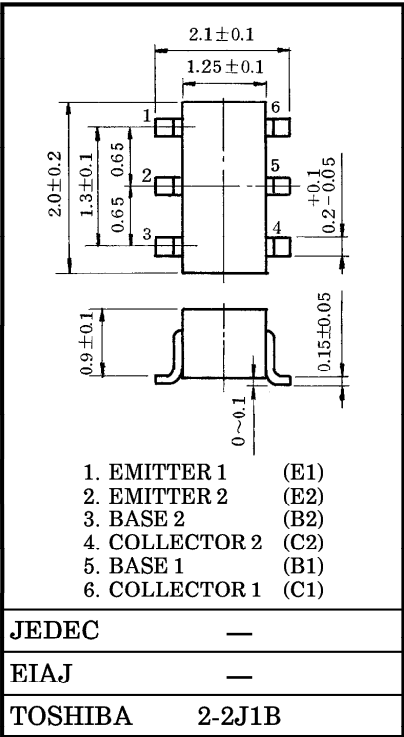
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

RN2970, RN2971

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT
AND DRIVER CIRCUIT APPLICATIONS.

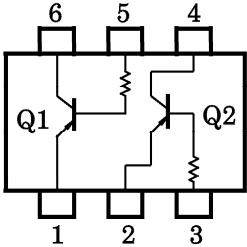
- Including Two Devices in US6 (Ultra Super Mini Type with 6 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1970~RN1971

Unit in mm

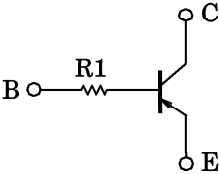


Weight : 6.8mg

EQUIVALENT CIRCUIT (TOP VIEW)



EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Collector Power Dissipation	P_C^*	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

* : Total Rating

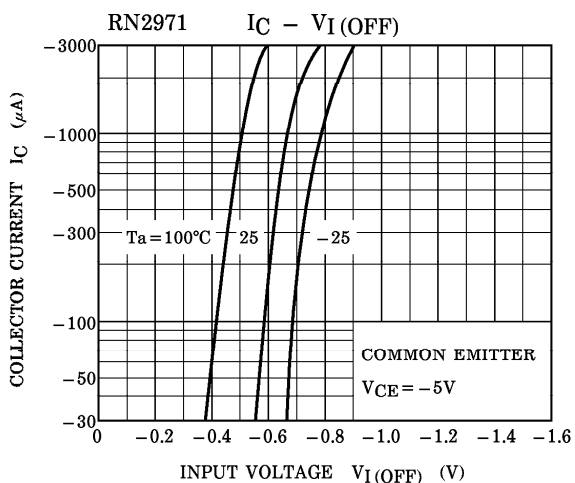
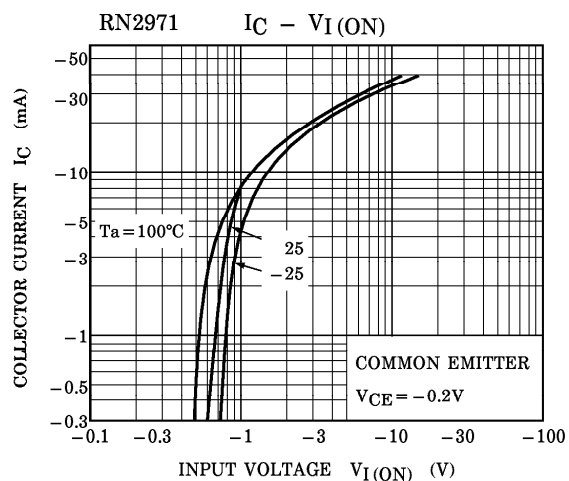
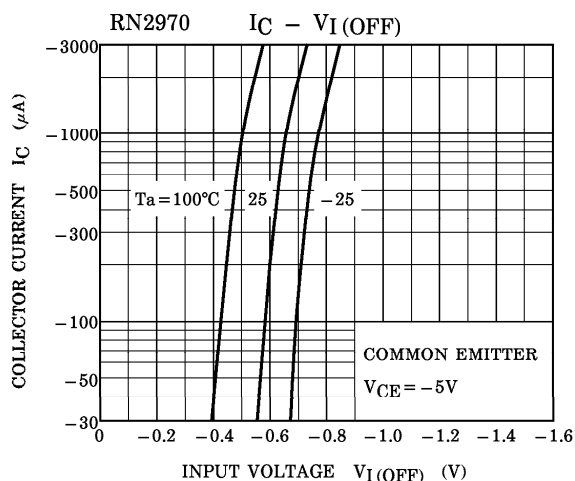
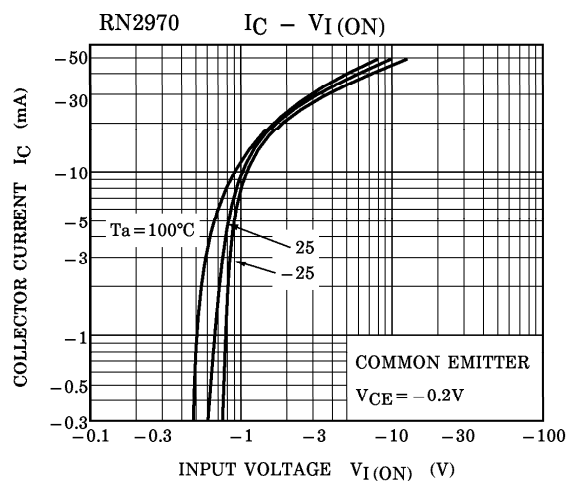
ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-100	nA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -5V, I_C = 0$	—	—	-100	nA
DC Current Gain		h_{FE}	$V_{CE} = -5V, I_C = -1mA$	120	—	400	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V
Transition Frequency		f_T	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3	6	pF
Input Resistor	RN2970	R1	—	3.29	4.7	6.11	kΩ
	RN2971			7	10	13	

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● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

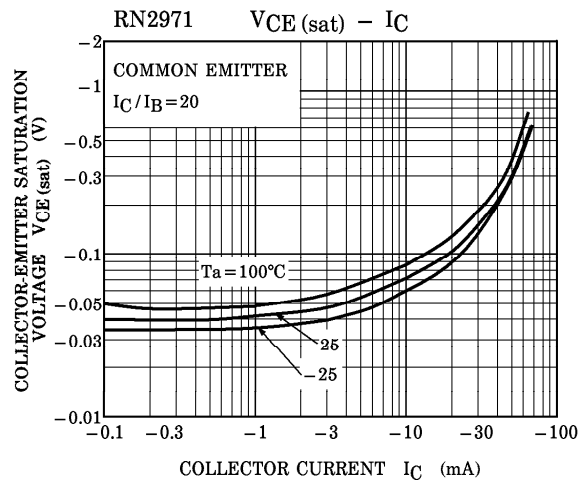
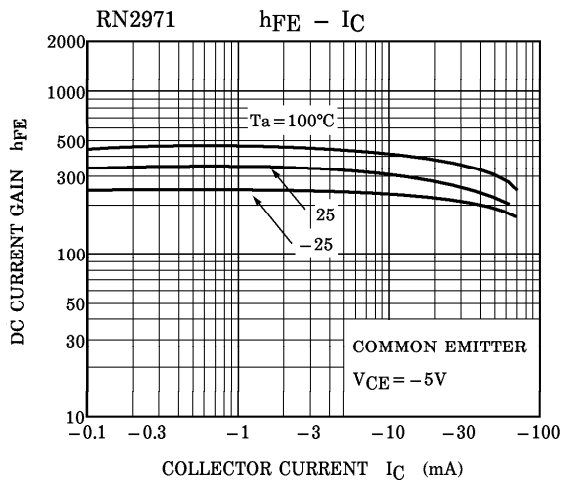
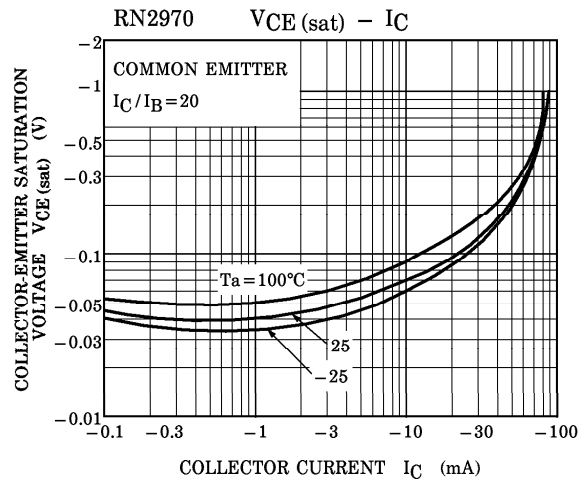
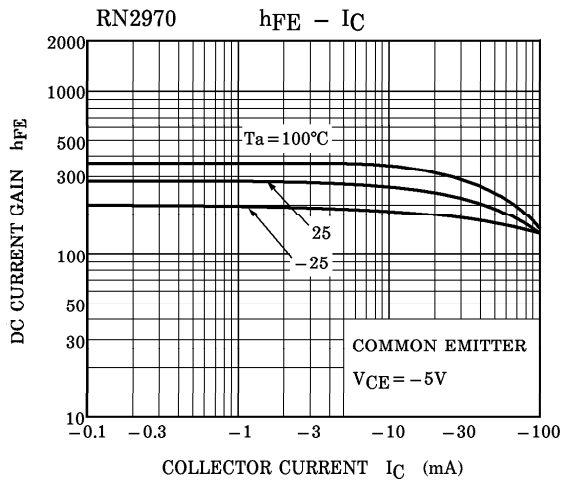
(Q1, Q2 COMMON)

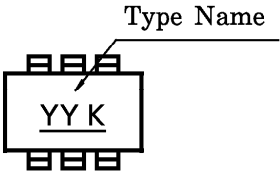


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(Q1, Q2, COMMON)



TYPE NAME	MARKING
RN2970	
RN2971	